



1820 E. Big Beaver Rd. P 248.614.2400
Troy, MI 48063 USA F 248.614.2411 altair.com

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Michigan State Legislature
State of Michigan
Lansing, MI 48933

Subject: Switch Michigan Datacenter Letter of Support

Dear Elected Officials of the Michigan State Legislature,

We are writing you to provide some background and perspective in regards to Altair's involvement with Switch and support of the proposed Switch Grand Rapids datacenter.

Celebrating 30 years as a privately-held Michigan high-tech business, Altair is headquartered in the City of Troy with 45+ regional offices throughout 24 countries and a staff of more than 2,000. The company is focused on the development and broad application of simulation technology, leveraging high-performance computing (HPC) and cloud architectures, to synthesize and optimize designs, processes and decisions for more than 5,000 clients worldwide.

HPC is an integral part of our business strategy and a vibrant part of our software business. PBS Professional® HPC workload management technology, originally developed at NASA's Ames Research Center, was acquired by Altair along with its development team in 2003. Following the acquisition, Altair has invested and developed an entire suite of HPC tools now branded as PBS Works™.

Today, PBS Works is the industry leading commercial solution to automate HPC job scheduling, management, monitoring and reporting, and the trusted solution for complex TOP500 supercomputing systems and broad industry clients including NASA, Boeing, Chevron, Ford, GE, Lockheed Martin, Merck, Pfizer, Ping and Stanley Black & Decker. PBS Works was honored with HPCwire's coveted Reader's Choice Award for Best HPC Software in 2014 and has OEM and channel partnerships with Cray, Dell, Fujitsu, HP, Intel, Microsoft and SGI to name a few.

Altair's engagement with Switch began in May 2013 following Intel's award of its TOP500 supercomputer system – Cherry Creek – to the University of Nevada, Las Vegas (UNLV). Through a donation to the university by Rob Roy, CEO and founder of Switch, Cherry Creek is housed, cooled, maintained and accessed via high-speed fiber optic cables at Switch's nearby SuperNAP datacenter (the same datacenter structure proposed for the Grand Rapids Switch facility).

UNLV chose PBS Works as its HPC workload management platform for Cherry Creek. We have worked closely with Switch and Intel to support UNLV's research in biology and medicine, as well as other sciences and engineering with this system. The university also makes Cherry Creek available to other research institutions, and to industry on a pay-for-use basis.

Altair is actively pursuing new business opportunities with Switch in support of our HyperWorks Unlimited® cloud technical computing appliance for computer-aided engineering (CAE).

As a Michigan-based technology company with a deep understanding of the global HPC market place, we believe a Switch datacenter will be a valuable asset for the State of Michigan. Not only do we see this site as a job creation opportunity, it will also provide a rich resource for Michigan businesses and academia/government research, as well as serve as a magnet to attract and cluster technology-based businesses and IT/HPC talent to Michigan.

IDC, the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets, recently reported that HPC has been one of the fastest growing IT markets, expanding 10 fold from about \$2 billion worldwide in 1990 to more than \$21 billion in 2014. IDC forecasts continued robust growth to about \$31 billion in 2019. Michigan's support to attract and retain HPC related businesses will help ensure a healthy state economy, retain Michigan college graduates from pursuing careers outside of the state and position Michigan as a highly desired location to work, live and do business.

It is also important to note that HPC is enabling technology and in many cases required to support Michigan's Emerging Technologies Fund Program. From advanced automotive to support autonomous vehicle technologies and the Internet of Things (IoT) to life sciences for genomic research, every emerging sector Michigan has identified will utilize HPC for discovery and/or to operate their business.

Finally, a decision to support Switch's proposal to establish their eastern datacenter hub in Michigan will closely align with President Obama's recent Executive Order establishing the National Strategic Computing Initiative (NSCI). The security, connectivity and computing power uniquely offered through a Michigan Switch datacenter will position the State to actively participate in this initiative to advance HPC to an exascale level. Altair is actively engaged to support the NSCI and sees significant opportunities for public-private partnerships at the state level and nationally related to this HPC initiative.

It is Altair's hope that the proposed Switch Grand Rapids datacenter comes to fruition. From an insider's perspective, and one who has been in the HPC industry for decades, we see this as an excellent opportunity to create a HPC business cluster and high-demand IT careers in Michigan.

Kindest Regards,

James Scapa
Chairman & CEO
Altair

Brett Chouinard
COO
Altair

Sam Mahalingam
CTO, Cloud Solutions
Altair

Michael J. Kidder
SVP, Corporate Marketing
Altair

CC: Michigan Economic Development Corporation

